

Asia Pacific Region Only



# **PARTS LIST**

## **TOUGHLIFT™ FMT & HLM-2**

### **LIFT AXLE AND SUSPENSION**

LIT NO: 97114-088

DATE: July 2021

REVISION: B

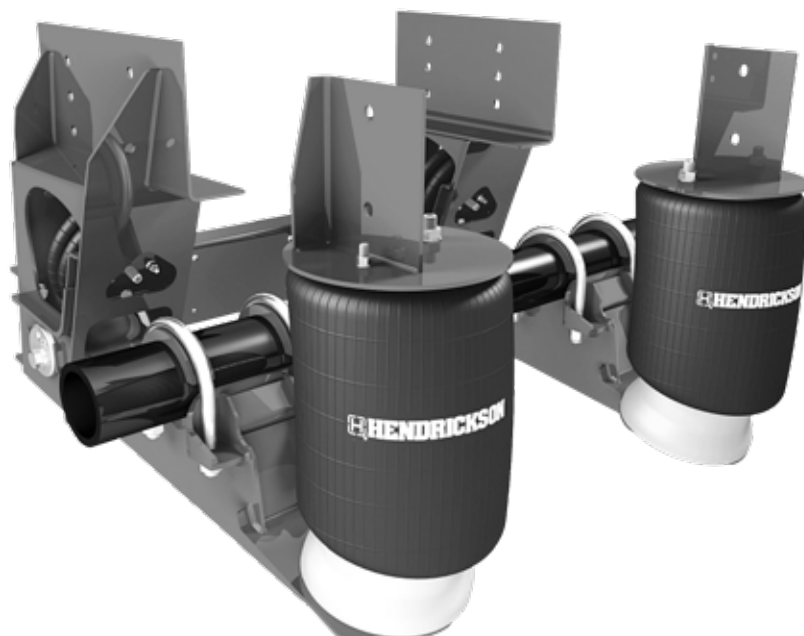


TABLE OF CONTENTS

ABBREVIATIONS.....2

INTRODUCTION.....3

AXLE & SUSPENSION IDENTIFICATION.....3

FRAME HANGER & PIVOT.....4

AIR SPRINGS & HARDWARE.....6

LIFT AXLE CONTROL VALVE.....7

SHOCK ABSORBERS & HARDWARE.....8

SPECIAL TOOLS.....11

REVISIONS TABLE.....12

Document Interactivity

The interactive **Table of Contents** allows users to quickly navigate to the appropriate page with a single mouse click. The **INDEX** button at the bottom of each page returns you to the **Table of Contents**. Other links within the document are identified by black underlined text, whereas links to external websites are identified by blue underlined text.

ABBREVIATIONS

Abbreviations used in this document may include the following terms:

- AR – As Required
- ARL – Auxiliary Rebound Limiter
- Assy – Assembly
- HCV – Height Control Valve
- NSS – Not Serviced Separately
- PCD – Pitch Circle Diameter
- Std – Standard
- TFB™ – TRI-FUNCTIONAL™ Bush



## INTRODUCTION

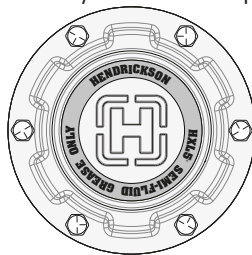
HLM-2 is the popular pusher and tag suspension system from Hendrickson. When combined by Hendrickson with a Hendrickson drop or straight axle it becomes the TOUGHLIFT™ FMT lift axle. Road friendly suspensions were introduced in June 2021. Refer to “Shock Absorbers & Hardware” on page 8 for assistance identifying road friendly suspensions.

## AXLE & SUSPENSION IDENTIFICATION

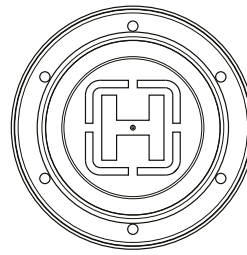


**Suspension Part Number Label – Door Opening**

Hendrickson truck air suspensions are supplied with an identifying part number label. This is usually attached onto the driver door jamb but may also be found in any of the door openings.

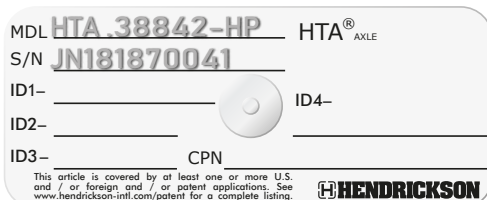


**HXL5 Wheel End Hubcap**



**[H] Standard Wheel End Hubcap**

If the axle is manufactured by Hendrickson it will have a hubcap labelled with a large [H]. All TOUGHLIFT FMT lift axles contain an axle manufactured by Hendrickson. The hubcap may show other details about the wheel end, such as recommended grease.



**Axle ID Plate – RH Brake Chamber Bracket**



**Suspension Assembly Plate – Suspension Beam**

In addition to the identifying hubcap, a Hendrickson axle will usually have an identification plate attached to the right hand brake chamber bracket. TOUGHLIFT lift axles have a Hendrickson assembly plate attached to the suspension beam, usually on the left hand side. The assembly number will vary, depending on selected options, along with the assembly date.

Some suspension components may only be available through the vehicle manufacturer. As a guide, if the frame hanger C-Channel is bolted it will be an OEM installed suspension, which may use components unique to the vehicle manufacturer. If the C-Channel is welded it will most likely be an aftermarket fitment, which will generally use Hendrickson components. This parts list details spare parts available only for aftermarket suspensions. Refer to the vehicle manufacturer for OEM suspensions. For Hendrickson axle, wheel end and brake components refer to the following documents:

- [97114-072](#) Loose Axle Parts List
- [97114-100](#) Trailer Wheel End Systems Parts List
- [97114-097](#) Trailer Brake Systems Parts List

Parts published in this parts bulletin are the latest available parts. Unless otherwise noted, they are functionally equivalent to, or better than, the originally supplied components.

**NOTE:** All quantities listed within this parts list are as applicable for a single axle.



**FRAME HANGER & PIVOT**

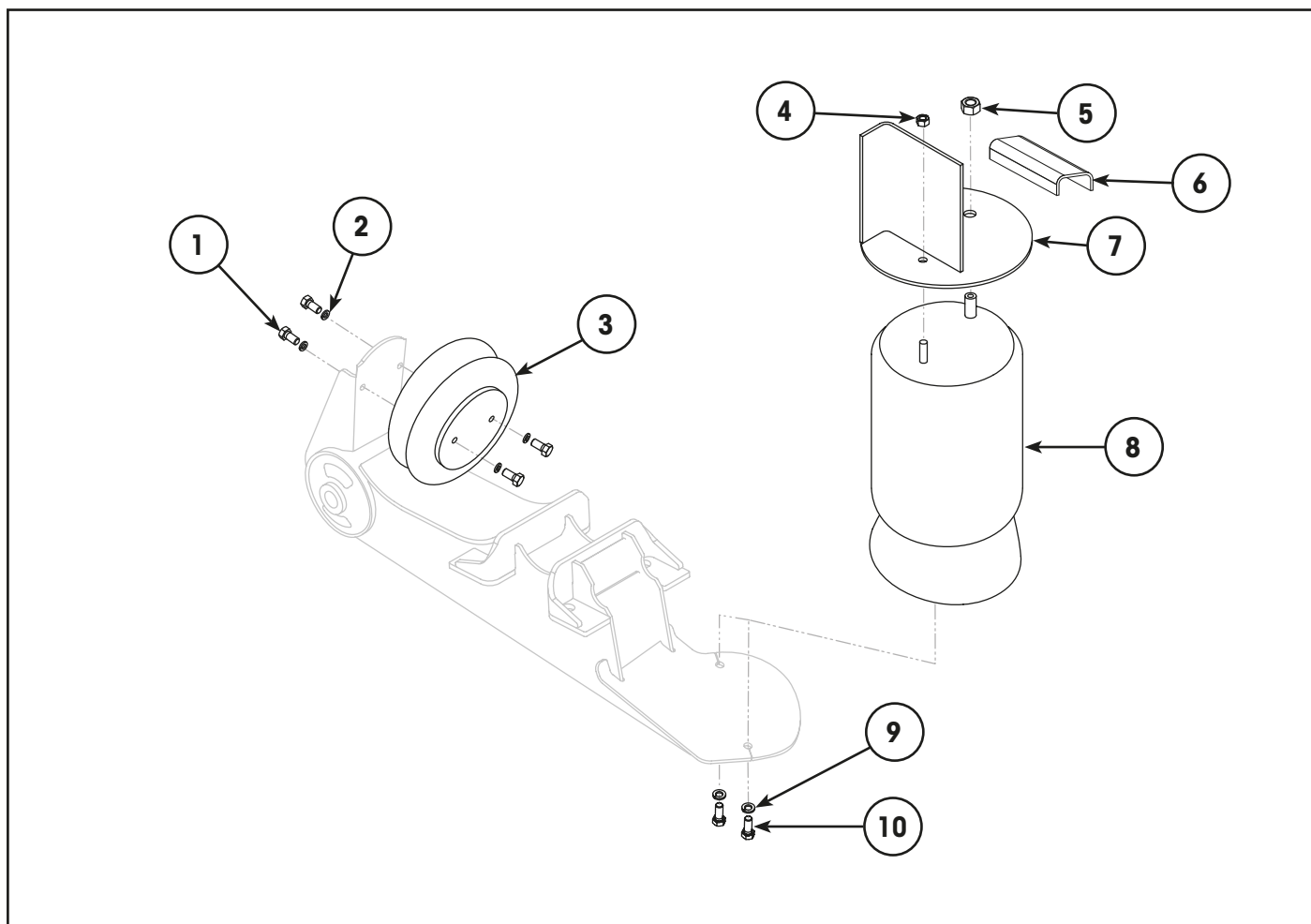
Item	Part Number	Description	Qty	Notes
1	NSS	Shear Bolt – QUIK-ALIGN	2	Use item 17, 18 or 19.
2	NSS	Hardened Washer – 7/8"	4	Use item 17, 18 or 19.
3	C-20925	Flanged Washer, Outer – QUIK-ALIGN	2	Eccentric. Included in items 18 & 19.
4	007349-1	Frame Hanger Assembly – Left Hand	1	
	007349-2	Frame Hanger Assembly – Right Hand	1	
5	98870-309	Plate, Hanger Backing	2	
6	002519-319	Plate, 1/2" x 3" x 18"	2	
7	007391	C-Channel, 3" x 41"	1	<b>[1]</b> Welded C-Channel.
8	NSS	Nut, Prevailing Torque – 7/8 UNC	2	Use item 17, 18 or 19.
9	C-20924	Flanged Washer, Inner – QUIK-ALIGN	2	Concentric. Included in items 18 & 19.
10	NSS	U-Bolt, Axle	4	Use item 20.
11	NSS	Bush, TRI-FUNCTIONAL™	2	<b>[2]</b> Use item 19.
12	S-21099-4P	Kit, Wear Washer – Flat	1	Included in item 19.
13	001907-1	Beam Assembly – Drum Brake Left Hand	1	Suits drum brake. Includes bush, item 11.
	001907-2	Beam Assembly – Drum Brake Right Hand	1	Suits drum brake. Includes bush, item 11.
	13389-001	Beam Assembly – Disc Brake Left Hand	1	Suits disc brake. Includes bush, item 11.
	13389-002	Beam Assembly – Disc Brake Right Hand	1	Suits disc brake. Includes bush, item 11.
14	NSS	Washer, Flat 7/8"	8	Use item 20.
15	NSS	Nut, 7/8"-14	8	Use item 20.
16	A-14011	Lube Pack, TRI-FUNCTIONAL Bush	2	Included in item 19.
17	S-31623	Kit, Pivot Bolt	2	Includes items 1, 2 & 8.
18	S-31625	Kit, QUIK-ALIGN	2	Includes item 1, 2, 3, 8 & 9.
19	98785-178	Kit, Pivot Bush – Flat Washer	2	<b>[2]</b> Includes items 1, 2, 3, 8, 9, 11, 12 & 16.
20	006362	U-Bolt Kit – Not Illustrated	1	Includes U-bolts, nuts & washers, items 10, 14 & 15.

**[1] NOTE:** The welded C-Channel is used in aftermarket applications. Bolted C-Channels are generally used for OEM applications. Refer to the vehicle manufacturer for bolted C-Channel components and OEM fasteners.

**[2] NOTE:** The TRI-FUNCTIONAL™ bush (TFB™) is larger than the inner diameter of axle beam tube. To avoid damaging the TFB, the correct installation tool **MUST** be used along with the appropriate lubricants. Refer to the "Special Tools" on [page 11](#) section for tool details. For bush replacement procedures, refer to Hendrickson [Technical Bulletin L427](#).

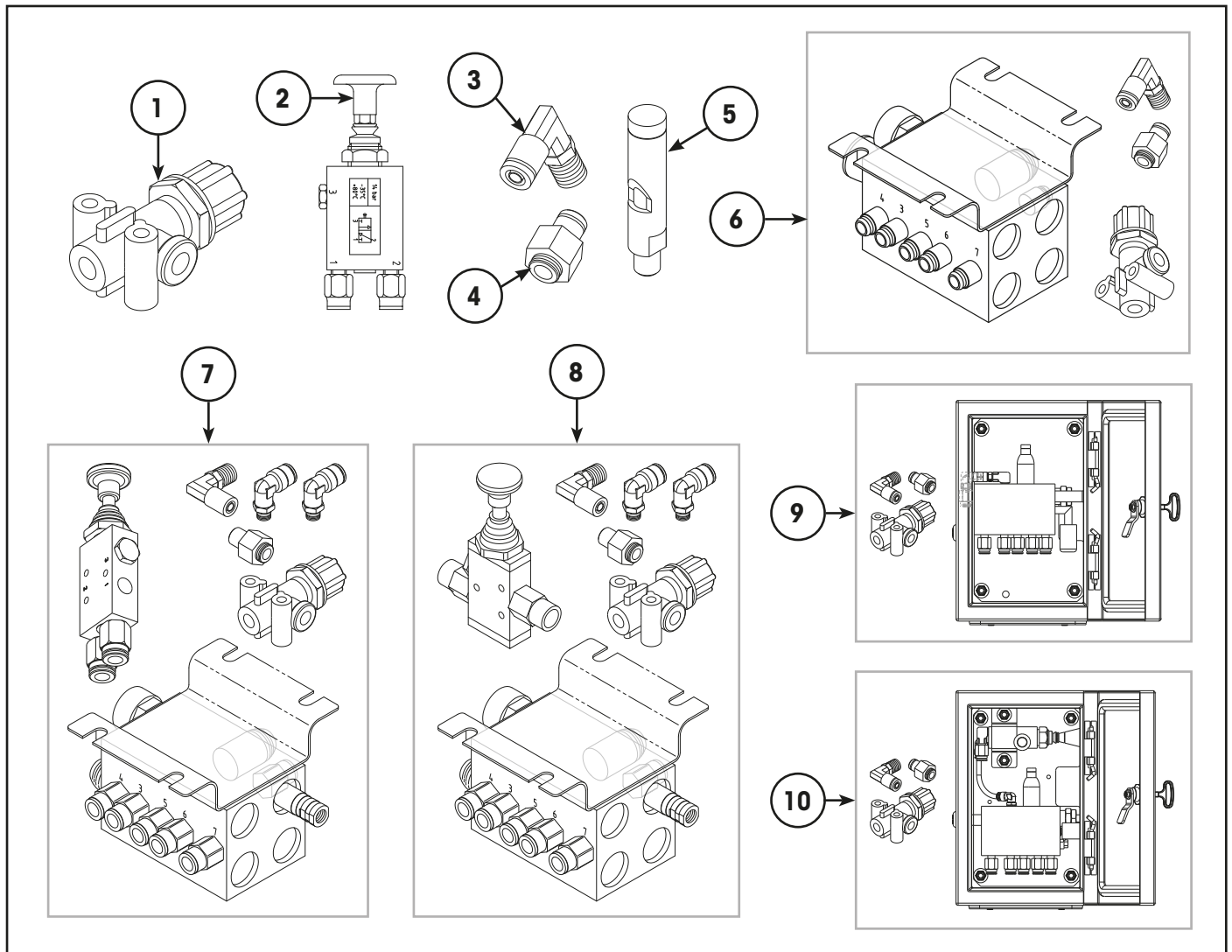


## AIR SPRINGS & HARDWARE



Item	Part Number	Description	Qty	Notes
1	NSS	Bolt, 3/8"-16 x 1"	8	Use item 11.
2	NSS	Lock Washer, 3/8"	8	Use item 11.
3	S-14318	Lift Air Spring	2	
4	NSS	Nut, 1/2"-13	2	Use item 12.
5	NSS	Nut, 3/4"-16	2	Use item 12.
6	98870-308	Spacer, C-Channel	2	For ride heights 10 inches and above, to support air spring height of 410 to 493 mm at ride height.
7	001951-1	Upper Air Spring Mount – Left Hand	1	
	001951-2	Upper Air Spring Mount – Right Hand	1	
8	S-14249	Air Spring	2	
9	NSS	Lock Washer, 1/2"	4	Use item 12.
10	NSS	Bolt, 1/2"-13 x 1-1/4"	4	Use item 12.
11	98111-152	Lift Spring Fastener Kit – Not Illustrated	2	Includes bolts & washers, items 1 & 2.
12	S-1981/2	Air Spring Fastener Kit – Not Illustrated	2	Includes nuts, bolts & washers, items 4, 5, 9 & 10.

## LIFT AXLE CONTROL VALVE

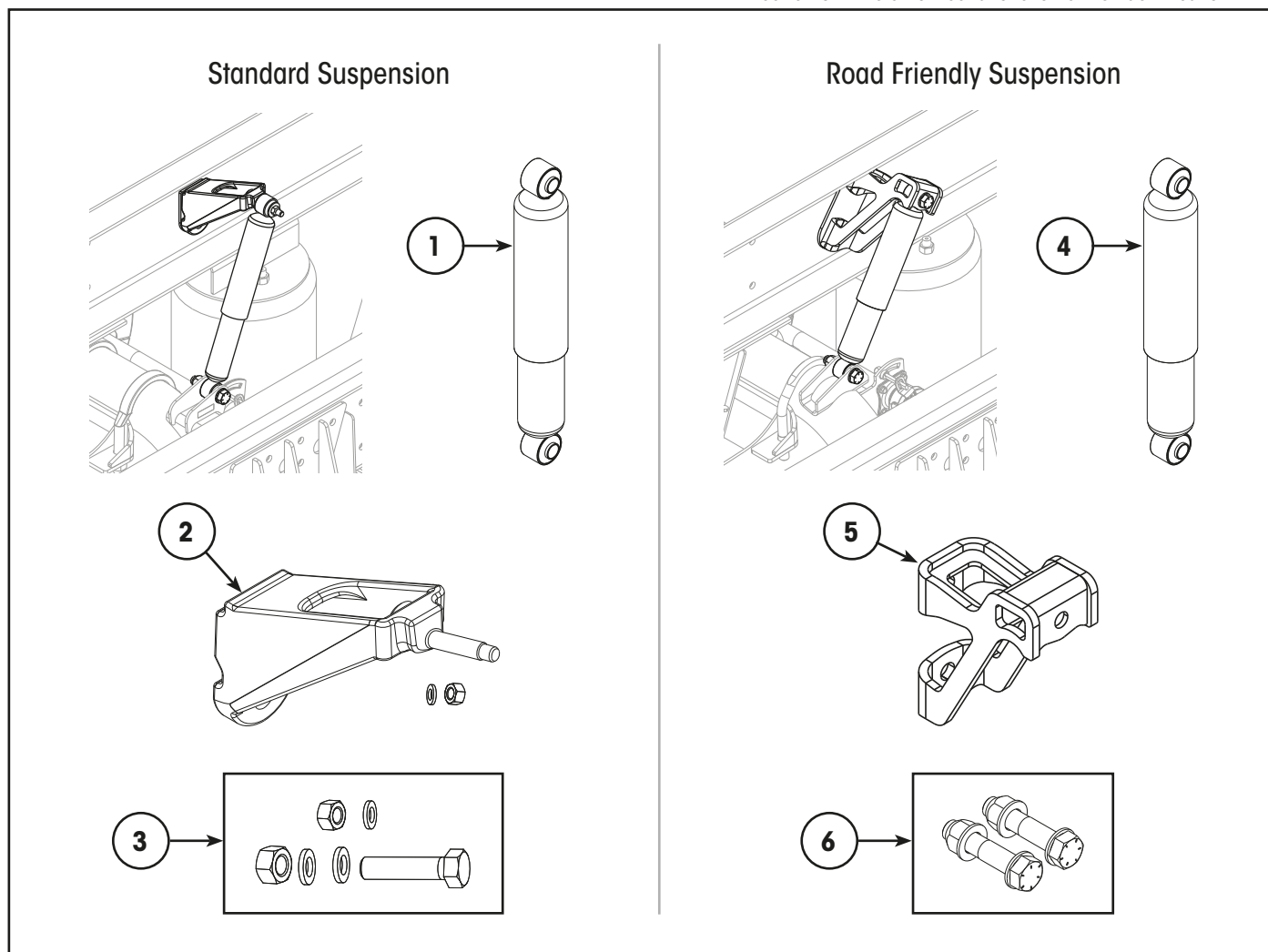


Item	Part Number	Description	Qty	Notes
1	98732-006	Pressure Regulator – 80 psi	1	Included in items 6, 7, 8, 9 & 10.
2	98402-003	Valve – Manual Override	1	Standard override valve for Auto/Auto LACV. Includes fittings. Included in items 7 & 10.
3	98732-003	Air Fitting – 90° Elbow	1	Use with pressure regulator, item 1.
4	98732-002	Air Fitting – Straight	1	
5	98732-059	Whistle	2	Included in complete LACV, items 9 & 10.
6	98975-004	Manual/Auto – With 80 psi Regulator	1	LACV with fittings & decal. Includes item 1, 3 & 4.
7	98975-005	Auto/Auto – With 80 psi Regulator	1	LACV with standard override valve, fittings & decal. Includes items 1, 2, 3 & 4. Refer illustration.
8	98975-008	Auto/Auto – With 80 psi Regulator	1	LACV with alternate override valve, fittings & decal. Includes items 1, 3, 4 & alternate (straight) version of item 2. Refer illustration.
9	98975-013	Manual/Auto – With 80 psi Regulator	1	Enclosure with LACV, regulator & fittings, item 6.
10	98975-014	Auto/Auto – With 80 psi Regulator	1	Enclosure with LACV, valve, regulator & fittings, item 7.

**IMPORTANT:** These axle lift control system components are only applicable to systems supplied by Hendrickson Australia.

## SHOCK ABSORBERS & HARDWARE

Suspensions changed from Standard to Road Friendly during June 2021. Refer to illustrations for further identification.

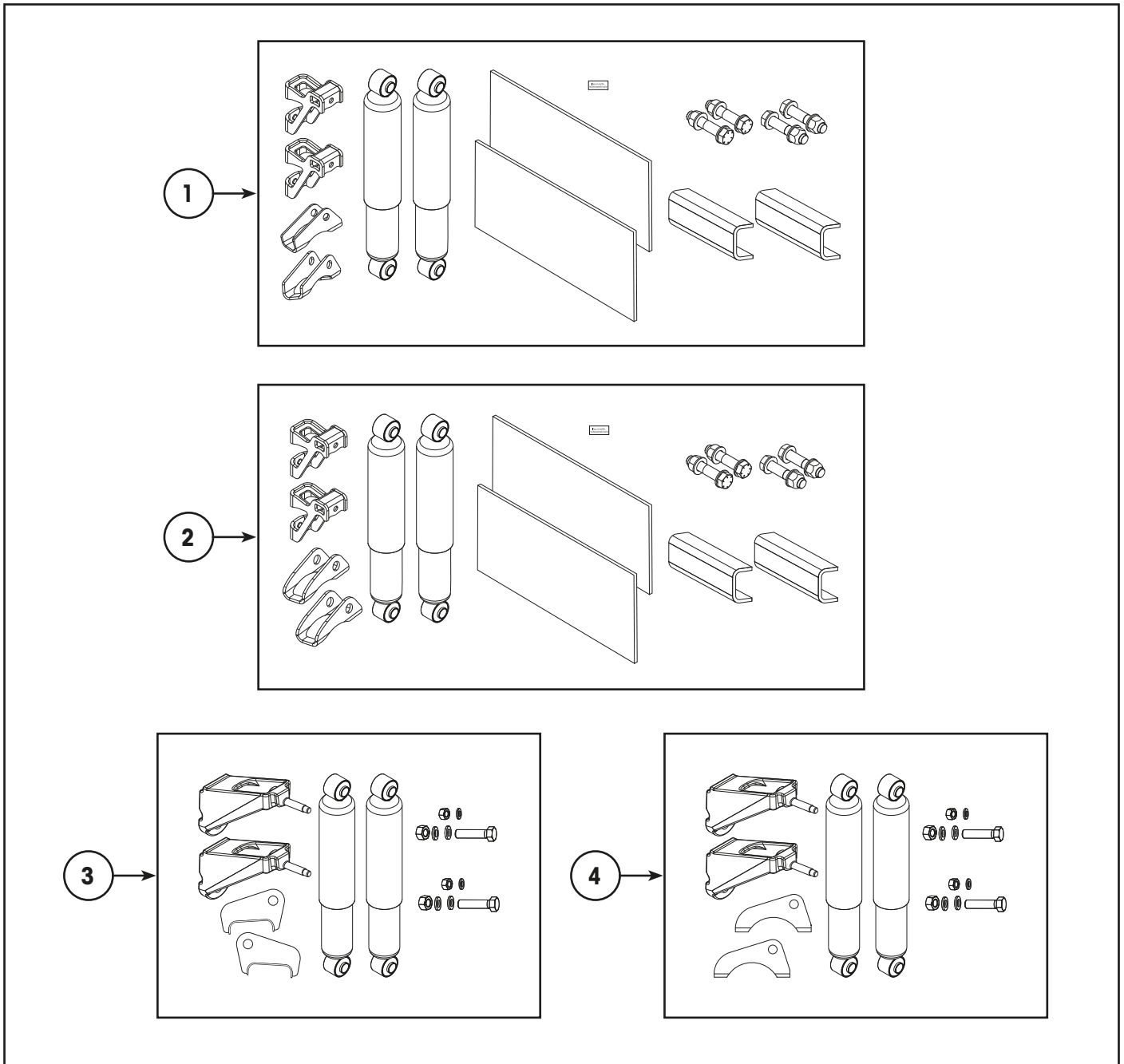


Item	Part Number	Description	Qty	Notes
1	60670-002-L	Shock Absorber	2	Standard suspension.
2	57328-001	Bracket, Upper Shock – Inboard	2	Includes top shock stud, washer & nut.
3	98785-177	Shock Absorber Mounting Hardware	2	Includes 1 bolt, 2 nuts & 3 washers.
4	98583-030	Shock Absorber	2	Road friendly suspension.
5	98699-020	Bracket, Upper Shock – Inboard	2	Bracket only to suit road friendly suspension.
6	98111-214	Shock Absorber Mounting Kit	2	Includes 2 bolt & 2 nuts. To suit 98699-020 bracket.

**⚠ CAUTION:** DO NOT use road friendly shock absorbers on a standard suspension as this WILL result in mounting failure. Standard and road friendly suspensions use different upper and lower shock mountings. The upper mounts are positioned differently on the chassis and the lower mount is completely different. Components CANNOT be interchanged.



## SHOCK ABSORBERS & HARDWARE

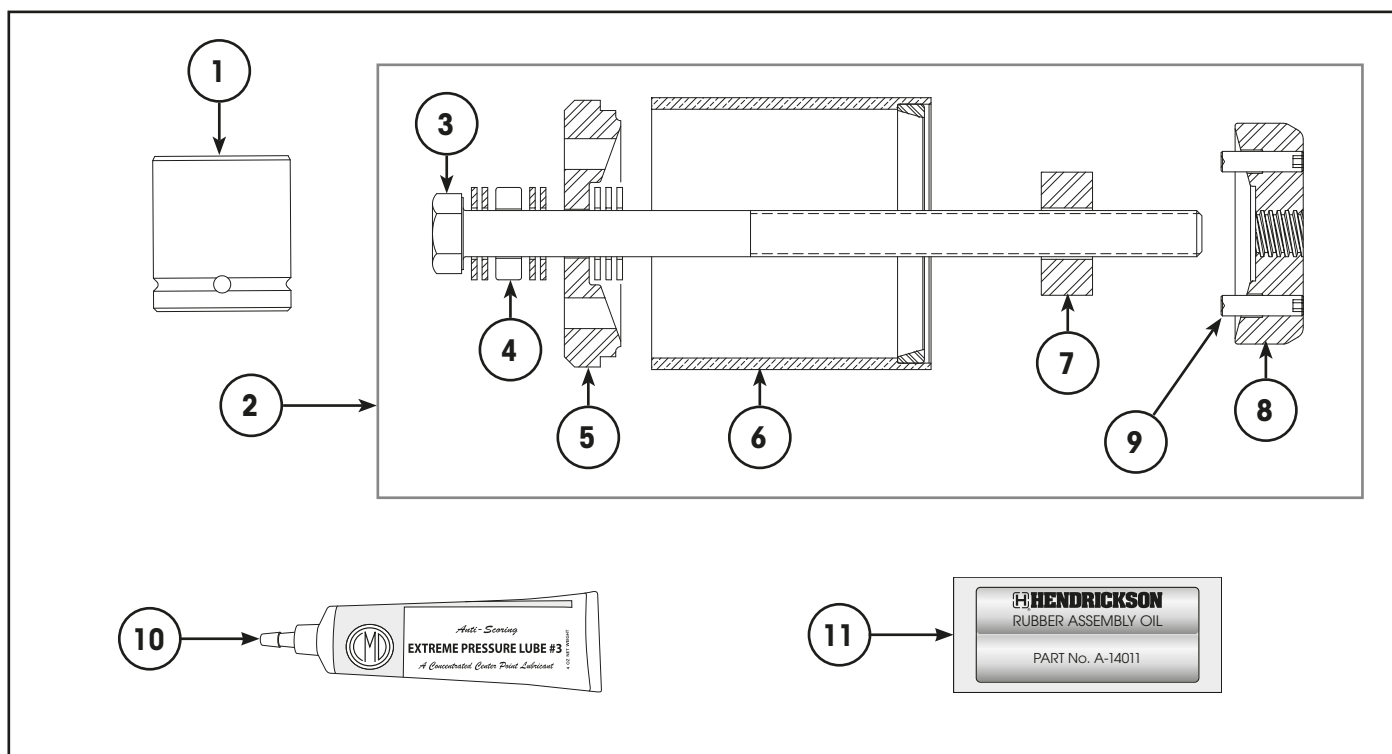


Item	Part Number	Description	Qty	Notes
1	98785-204	Kit, Road Friendly Shock Absorber Installation – Pusher Axle	1	Contains components and installation instructions required for road friendly compliance.
2	98785-205	Kit, Road Friendly Shock Absorber Installation – Tag Axle	1	Includes hanger support plate, air spring spacer c-channel, shock absorbers, road-friendly decal, upper & lower shock mounting brackets & hardware.
3	98785-030	Kit, Standard Shock Absorber Installation – Pusher Axle	1	Standard suspension kit.
4	98785-014	Kit, Standard Shock Absorber Installation – Tag Axle	1	Includes shock absorbers, upper & lower shock mounting brackets & hardware.



This page intentionally left blank

## SPECIAL TOOLS



Item	Part Number	Description	Qty	Notes
1	S-24303	Socket, Pivot Bolt – E20	1	3/4 inch drive
	S-24536	Socket, Pivot Bolt – E20	1	1 inch drive standard duty
	S-25119	Socket, Pivot Bolt – E20	1	1 inch drive heavy duty
2	S-21307A	Tool Kit - Wide TRI-FUNCTIONAL™ Bush	1	<b>[1]</b> Refer Note.
3	S-21308	Bolt, Acme Thread – 18 Inch	1	Included in item 2.
4	98762-001	Bearing, Thrust – TFB™ Tool	1	Included in item 2.
5	S-21312	Plate, Front – TFB Tool	1	Included in item 2.
6	S-21313	Tube, Transition – TFB Tool	1	Included in item 2.
7	S-21314	Spacer, Removal – TFB Tool	1	Included in item 2.
8	S-21309	Plate, Rear Drive – TFB Tool	1	Included in item 2.
9	SA-2800-4	Set Screw – 1/2"-13 x 4 inch	2	Removal only. Included in item 2.
	SA-2800-7	Set Screw – 1/2"-13 x 2 inch	2	Installation only. Included in item 2.
10	S-21337	Grease, Extreme Pressure	1	<b>[1]</b> Refer Note. Essential for use with tool on installation. Included in item 2.
11	A-14011	Lube Pack - TRI-FUNCTIONAL Bush	1	To lubricate bushes on installation.

**[1] NOTE:** The TRI-FUNCTIONAL™ tool kits are supplied with one tube of extreme pressure grease. It is essential to use this grease on the tool's Acme thread to avoid thread form damage. Do not apply this grease to the bush.



## REVISIONS TABLE

DATE	REV	PAGE	DESCRIPTION
Oct-2019	A	All	New document to suit suspensions and axles supplied through Australia. ECN 11531, 11581, 11593 & 11596.
June-2021	B	7	Clarify LACV kits. Add whistle, ECN 1159.
June-2021	B	5, 8, 9	Add C-Channel, hanger backing, road friendly suspension options, ECN 11843.

*Actual product performance may vary depending upon vehicle configuration, operation, service and other factors.  
All applications must comply with applicable Hendrickson specifications and must be approved by the respective vehicle manufacturer with the vehicle in its original, as-built configuration.  
Contact Hendrickson for additional details regarding specifications, applications, capacities, and operation, service and maintenance instructions.*

**Need Help? Call 03 8792 3600 or Email [customerservice@hendrickson.com.au](mailto:customerservice@hendrickson.com.au)**



[www.hendrickson.com.au](http://www.hendrickson.com.au)

**HENDRICKSON ASIA PACIFIC PTY LTD**  
ABN 21 004 992 769  
32-44 Letcon Drive, P.O. Box 1063  
Dandenong, Victoria, 3175  
61.3.8792.3600 • Fax 61.3.8792.3699

**HENDRICKSON NEW ZEALAND**  
Unit P, 24 Allright Place  
Mt Wellington, Auckland, 1060  
64.9.570.4721 • Fax 64.9.570.4816